

**Screencast:** [07-user-accounts.webm](#) or [07-user-accounts.mp4](#)

## UNIX and LINUX Administration Handbook - Chapter 7 - Adding New Users

### Related files (ensure the man-pages package is installed)

/etc/passwd  
 /etc/shadow  
 /etc/group  
 /etc/gshadow  
 /etc/login.defs  
 /etc/security/limits.conf (pam package)  
 /etc/skel/ (contains files/dirs copied to homedir of new accounts)

### **/etc/passwd** (man 5 passwd)

dowdle:x:1000:1000:Scott Dowdle:/home/dowdle:/bin/bash

- 1 - User name
- 2 - Encrypted password, an \*, or an x (see pwconv)
- 3 - UID
- 4 - GID
- 5 - GECOS - See: Wikipedia [GECOS](#) page
- 6 - Home Directory
- 7 - Default Shell

### **/etc/shadow** (man 5 shadow)

dowdle:\$1\$vkI/ffyR\$rSsCe9K.GsuK83.cWI:14277:0:99999:7:::

- 1 - User name
- 2 - Encrypted password
- 3 - Days since Jan 1, 1970 that password was last changed
- 4 - Days before password may be changed
- 5 - Days after which password must be changed
- 6 - Days before password is to expire that user is warned
- 7 - Days after password expires that account is disabled
- 8 - Days since Jan 1, 1970 that account is disabled
- 9 - A reserved field

See: Wikipedia page on [UNIX time](#)

### **/etc/group** (man 5 group)

dowdle:x:1000:dowdle

- 1 - Group name
- 2 - Encrypted password if used
- 3 - GID
- 4 - Comma separated user list

### Related Commands and Issues

/usr/sbin/useradd  
 /usr/sbin/adduser -> useradd  
 /usr/bin/chfn (Let's users adjust the GECOS)  
 /usr/sbin/usermod (usermod -aG wheel dowdle)  
 /usr/bin/passwd (What are the permissions on this file?)

`rpm -ql shadow-utils` (shows package contents)

`/usr/bin/whoami`

`/usr/bin/id`

What is an orphaned file?

## Escalating privileges

`sudo`, `sudo -i` (users in wheel group, other distros may use sudo group)

`su`, `su -l` (need to know the root password unless already root)

Everything mentioned above is for "local" accounts. If this were an advanced sysadmin class we'd cover various forms of centralized authentication like LDAP and NIS/YP as well as integration with systems like FreeIPA and Microsoft Active Directory. Many Linux distributions work well with centralized authentication systems. In the case of Red Hat-derived distributions, they offer `authconfig`, `sssd`, `realmd` and `freeipa-client`.